## Lesson 60 - Self-Sufficiency And Natural Hygiene


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- Article #1: The Natural Food of Man By Emmett Densmore, M.D.




The Hygienic lifestyle and the basic Hygienic philosophy lends itself easily to a self-sufficient lifestyle. As we have stated before, man is a frugivore, as are the other primates. A brief study of these primates will give us a clearer picture of man's dietetic nature.

## 1. Similarities Among The Primates

In 1680, Edward Tyson was the first to use comparative anatomy extensively and demonstrated the similarities between the orangutan and man. His best known work was published in 1699 which compared the anatomy of a Pygmie with that of a monkey, an ape, and a man. Tyson was himself surprised at how closely the orangutan resembled man.

In 1758, Carl Linnaceus recognized the close relationship between humans, monkeys, and apes. He was the one who officially devised the group name or order, primates, to encompass them all and to denote their high ranking in the organization of the animal kingdom. At the time it was generally held that species were fixed. The arrangement of the animal kingdom was seen as a precise hierarchy of increasingly complex forms, each created independently of ones to either side of it—beginning with the humblest creature and culminating with the primary of man. Linnaceous's work did not threaten this theory. He believed that all animals had been created by the hand of God and that man had been set apart from them in a special way.

By the end of the 18th and well into the 19th century, two distinct lines of approach had appeared. There were still those who saw all forms of life as having been created by the hand of God, and there was a now hardening core of evolutionists who thought in terms of gradual processes of complexity. The conclusion that man was in effect a highly-developed ape was a bombshell to Victorian Britain and to the world at large. It was in direct contradiction to the Biblical doctrine that man was made in God's image.

The debate on man's origins continues to rage, though among scientists rather than theologians. A mass of fossil remains have been found to justify Darwin. The evidence does not suggest, and never has, that we evolved from any ape that we know today. It suggests that both we and these apes had a common ancestor which developed along different paths, going their different evolutionary ways, something like 20 million years ago, during the Miocene Period.

So far as the anthropoids are concerned, it is apparent that they began as arboreal creatures, living on the fruits that trees yield especially for consumption. Wild fruits constitute nearly the whole diet of the orangutan and the chimpanzee. The gorilla, whose weight brought him along with man, to the ground, has expanded his menu to include wild cherry, berries, and bamboo shoots, and some roots.

A key factor to the behavior of the orangutans is the distribution and seasonal ripening of the fruits of the forests. Orangs show a strong liking for such fruits as figs, lichees, plum, mangosteen, durian, and rambutan, all lone trees scattered somewhat thinly through the forest. To survive, they must know exactly where these delicacies are located, and when they will be available. When they find one of them ready for eating, they will immediately strip it bare and then set off for the remaining trees of the same species growing within their range. This mono diet of fruits proves most condusive to the health of the orangutan and the perpetuation of their species.

The full-grown gorilla male may weigh as much as 600 pounds. Yet despite their great size and fierce aspect, gorillas have remarkably peaceful dispositions and lead generally tranquil lives. Found only in tropical forests and mountains of central Africa, they feed on the fruits and the vegetation that they find there.

Charles Darwin predicted more than 100 years ago that Homo Sapiens would be found to have evolved in Africa. It is now accepted that he was right. Fossil bones and stone artifacts found over the last decade in Tanzania, Kenya, and Ethiopia have extended human history back over five million years. It now seems certain that our prehuman ancestors shared their African homeland with creatures— the Australopithecines—to whom they were closely related, but yet who vanished into evolutionary oblivion.

Analysis of the protein molecules of blood among living primates suggests, on the basis that the more similar they are from different animals, the more closely related those animals are. A significant result of these blood tests was that in the chimpanzee and man some 99% of proteins are identical, confirmation of their closeness to man.



## 2. Man's Fruit And Vegetable Culture

Like the apes, humans have always been gatherers of fruits. The tropical fruits we know today are the result of cultivation. Similarly, the fruits of the temperate zone—the apple, lemon, orange, pear, fig, apricot, plum, filbert, walnut, etc.—could only have reached their present position through their improvement by man over many millennia. Most of these food plants are of Asiatic origin: they are the products of an age-old fruit culture.

The more important annuals appeared first in association with man and the simultaneous appearance on the historical record indicates a greater age of agriculture than the archaeologists and anthropologists have allowed. This is a logical conclusion because, as cultivated species, fruits and nuts could only have been developed from time to time under the artificial conditions imposed by humankind. If they should be abandoned to nature, they would disappear. The wild fruits eaten by anthropoid creatures were the prime factor in human development and not a product of that development.

According to Henry Bailey Stevens (*The Recovery of Culture*, New York: Harper & Brothers Publishers, 1953), it was after the second glaciation that human tools made their appearance. It appears that there are two main types of tools which were used during that early period. They are the hand axes that originated in the South and the flakes that were used as spears and harpoons in the North.

The hand ax is particularly well fitted for dealing with trees and wood, digging up roots, and cultivating the ground. Also, from this point of view, it seems rather obvious that the hand ax must have originated in a southern, tropical, or subtropical country, where forest and tuberous plants abound. The presence of stone tools at this time suggests that man was actually planting seeds.-The great body of mankind living in the warmer portions of the earth need have been no more concerned with hunting and fishing than were the apes. Their main interest lay in obtaining food from plants, and they became horticulturists.

When the ice age came and most men went south, scattering tribes were caught in the peninsulas or between mountain ranges and the ocean. These tribes had to face living in a world where green life either vanished or became very meager. If they were to survive, they had to readjust themselves drastically. They came to eat great quantities of shellfish. They learned the use of fire and they became beasts of prey. It was they who developed the spear and the harpoon and became accustomed to eating meat.

As the ice receded and plant food became again abundant, the capacity of the middle lands increased and the growers of crops moved into a region accustomed to the hunting economy. Thus the ultimate population of these lands was exposed in the Stone age to two distinct types of culture—one of the handax culture of the South, the other, the spear culture of the North.

The evidence appears overwhelming that the intimate relationship between anthropoids and fruit trees did not end a million years ago when man descended to a terrestrial existence. Rather, the association continued in the southern lands and was the actual impetus in our whole cultural development. It was when man found that he could affect his food supply through the selection and planting of seeds and cuttings and the improvement of soil conditions, that he started the great upward spiral that set him above the apes. Culture developed when we evolved from the simpler primate into the complex human.



## 3. Food Self-Sufficiency

Like our food-gathering predecessors, we can also be self-sufficient in obtaining our daily food. (Editor's note: Of course, this is not possible now for most people but, most people can be largely or wholly food self-sufficient as many people in this country and the world over are.)We do not have to rely on supermarkets for tasteless, overfertilized, and oversprayed fruits and vegetables. Since all of the food that we require is easily cultivated, and since we do not have to rely on animal products, we can easily grow our own foods.

Even the city dweller can grow fruits and vegetables in containers and be able to at least significantly contribute to their food needs. Many cities now have started community gardens where you can rent a plot for the season and grow all of your own vegetables. In the warmer sections of the country, this can be a year-round project. There will never be any need to purchase any supermarket produce. Even in the cold regions, the use of cloches, cold frames, and hotbeds can greatly extend the growing season. With a root cellar to preserve many of the vegetables and fruits, you can be self-sufficient even in the North. Lets take a look at some of those aids to food self-sufficiency.

### 3.1 Cloche

A chloche is a glass or plastic tunnel not more than 24 inches wide and of any length. It is designed to cover crops that are in the field or garden and thus offer them protection from extremes in temperature.

Thus, with a cloche, you can get a jump on the season and set out plants weeks earlier than you normally

could. You will be harvesting fresh lettuce before most people think of putting the plants in the ground and other more tender crops such as tomatoes can be gotten off to super early starts with earlier harvests.

At the end of the season, plants can once again be protected by these handy devices and you will be still harvesting weeks after the first frost.

## 3.2 Cold Frames and Hotbeds

Using cold frames and hotbeds will bring us one step closer to food self-sufficiency. One main advantage of these devices is that you can start your own vegetable plants and not rely on the few select varieties that are offered by the local nurseries. You can select those particular varieties that do especially well in your particular growing area and suit your needs and tastes. You will also be assured that your seedlings are not given chemical fertilizers and pesticides that result in weaker and less desirable plants.

Cold frames and hotbeds are of similar construction. They both have a wooden frame with glass windows on top that allows sunshine to reach the plants. These windows can be opened and closed to regulate temperature and for ventilation.

What is the difference between a hotbed and a cold frame? A cold frame has the same construction as a hotbed, except that there is no extra heat introduced into the cold frame. In a cold frame you can propagate such cold-loving plants as cabbage, broccoli, and cauliflower. Or you can use cold frames to acclimate to outdoor temperatures plants that have been started in hotbeds. Start heat-loving plants—peppers, tomatoes, eggplants, and others—in a hotbed.

There are two types of hotbeds. One is heated by a great deal of fermenting straw or fresh manure, which has been placed in a pit 2 1/2 feet deep. Another type is made by arranging electric heating cables five inches below the surface of the topsoil seedbed. The coils produce a steady heat day and night while the fermenting straw method is only effective for a few weeks.

## 3.3 Greenhouses

There are several advantages that all-year gardening greenhouses afford. Summer and fall crop yields can be stretched one season longer, often through the otherwise deadly winter season. Gardeners also use their greenhouses to gain a head start on springtime planting.

Another important plus to greenhouse gardening comes with the opportunity to control the growing environment. Frosts, blizzards, rainstorms, and other weather threats can be virtually ignored behind the protection of greenhouse windows and walls.

Further, there is a health-promoting aspect of home gardening. Tending fresh fruits, vegetables, and ornamental flowers throughout the year is considered by many doctors to be of value to help overcome daily stress and work tension.



## 4. Fruit

Basic to the Hygienic diet is fruit. This ideal food can be easily grown by a Hygienist and bring him one step closer to food self-sufficiency. There are many things that you can grow on a long-term and short-term basis. First of all, to get a quick crop of fruit during your first year, melons and tomatoes are the answer. They are easy to grow and will produce in virtually any part of the country. For those living in

the northern sections, look for varieties with short maturity dates. In the warmer sections of the country, the season can extend over a long period of time.

For the second season, you can additionally enjoy many varieties of berries. They will begin to bear the second year after they are planted and will produce in abundance every year thereafter.

Grapes are also a fairly fast crop to mature and an excellent addition to the Hygienic diet. Some fruit trees are suited to every part of the country and the possibilities are broad. If space is a limiting factor, try the dwarf varieties. 'They will begin to bear fruit early and the quality of fruit will be excellent.

## 4.1 The Orchard

It is natural for man to desire to plant and live in an orchard as his ancestors did. Given a choice, almost anyone would choose to surround himself with trees and follow our primal instincts. Here, we are surrounded with our basic food of fruit and nuts and a serene environment that will produce mental and physical health. The orchard provides the most natural and healthful habitat for man.

The Hygienist lives symbiotically with other creatures in his orchard and lets these creatures maintain harmony within the orchard. Thus, predatory insects keep pests down to reasonable numbers, as do birds. Since the homesteader does not see the orchard with dollar signs in front of his eyes, he accepts a few mishapen fruits and shares some of his bounty with the insects and birds. There is plenty to go around. Some of the culls can always be made into juice or put on the compost pile to enrich the soil. The beautiful blossoms in the springtime are not only an esthetic delight but benefit both man and bees. Bees collect pollen to manufacture their honey and at the same time pollinate the blossoms assuring perfect and bountiful fruit for man.

## 4.2 Dwarf Fruit Trees

Dwarf fruit trees, usually from six to ten feet tall, are easier to plant, fertilize, mulch, and harvest than are standard-sized fruit trees. They usually begin fruiting far sooner, often by their second year and sometimes the same year they are planted. Standard trees usually take five years to begin bearing and sometimes as long as ten.

A mature dwarf apple or pear can produce two or three bushels of quality fruit per season. Semidwarf varieties, growing from 12 to 15 feet tall, are also available. These produce more than twice as much fruit per season in a quarter of the space necessary for the standard tree. The fruit from dwarf trees is equal in size and quality to that of the standards, and is often larger and of better quality because of the individual care the growers lavish on their type trees.

Dwarf trees allow the homesteader with a small plot of land to have a variety of fruits in a succession of harvests. For example, the 40 by 40-foot space usually deemed necessary for the standard 25-foot apple tree could accommodate 16 dwarfs, each of which requires a 10 x 10-foot space.



## 5. Nuts And Seeds

The third most important item in the Hygienic diet is nuts and seeds. Although it takes several years for nut trees to reach maturity, it is well worth the wait. Just about all parts of the country can grow hickory nuts, English and black walnuts, pecans, or filberts. A couple of these trees in your back yard will satisfy all desire for nut protein for your family for the entire year.

While you are waiting for your nut trees to mature, you might want to try growing sunflower seeds. These plants are very quick to mature and will yield an abundance of nutritious seeds. Pumpkin seeds are another item that you might want to consider. There are now hulless varieties that you should consider planting in your garden.

## 5.1 Sunflowers

Growing sunflowers is an enjoyable experience. When plants are young, their heads will turn to face the sun each morning. Sunflowers grow very well with mild, organic fertilizers, and they have few insect pests, so spraying is unnecessary. They will grow on just about any soil although they may need some kind of support. A gently looping of two or three stalks together will help the plants withstand damaging winds. In a small garden, sunflowers should be planted in the back or along the perimeter of the property.

Sunflowers can be harvested as soon as the backs of the seed heads are brown and dry. At this time, the inner rows are ripe, but need drying. To harvest, cut off the heads with about a foot of the stalk attached. The stalks are tied together, and the heads hung in a airy room to dry. When thoroughly dry, remove the seeds by rubbing the heads lightly. If stored in airtight containers, their food content and vitamins will remain in good condition for a long time.

While sunflowers come in dwarf, semidwarf and tall varieties, the best kinds for the average gardener or homesteader are the common garden sunflower (H. annuus) and the giant sunflower (H. giganteus), also called the Indian potato. The common garden sunflower sometimes reaches heights of 10 to 12 feet, with blossoms one foot or more in diameter. The plants are widely cultivated in the United States, the Soviet Union, India, South America, Canada, and Egypt. It is the state flower of Kansas.

The giant sunflower is a strong-growing perennial that climbs to 12 feet or more and bears a huge flower packed with big seeds suited for harvesting and eating. Most popular and widely grown of the giant varieties is the Mammoth Russian, which matures in about 80 days. Besides being the largest and tallest of all sunflowers, it bears big, striped seeds that are thin-shelled, meaty, and rich in both flavor and food value. The plants' towering, husky stalks make excellent screens or field backgrounds. When grown, close together, their broad leaves block the sun from weeds.

Sunflower seeds are concentrated source of protein, calcium, phophorus, iron, vitamin A, nitrogen, thiamin, riboflavin, niacin, and vitamin E.

## 5.2 Pumpkin Seeds

Pumpkins, a member of the squash family, will flourish in every part of the United States where enough moisture is available. They prefer a reasonably rich soil and sandy loam is ideal. A well-drained bed containing a supply of humus and rotted manure will produce healthy plants. Regardless of the condition of the garden, greater success will be assured if you add compost to each hill.

Pumpkin seeds should not be planted until all danger of frost has passed. They need to be spaced about 10 to 12 feet apart as they need plenty of room to grow. Six seeds to a hill covered with an inch of soil will be sufficient. Thin each hill to the two best plants. Where the growing season is short, plants may be started indoors about a month before they can be planted outdoors. Outdoors, set two seedlings to each hill.

Pumpkins may be harvested when they achieve their characteristic orange color and the rind is hard. Then cut the fruit in half and scoop out the seeds. It is best to purchase the hull-less varieties that are now available. (Most seed companies carry them.) After you have removed the seeds, separate them from the stringy pulp and spread them out on screens or newspapers to dry. After thoroughly dry, place them in jars for storage.

Pumpkin seeds make an interesting addition to our diet and contain high-quality proteins, vitamins, and

minerals. You do not have to pay high prices for these nutritious seeds when you can so easily grow them yourself on your way to self-sufficiency.

As you can plainly see, all of the food components of the Natural Hygiene diet can easily be grown and propagated. This type of diet lends itself easily to a self-sufficient lifestyle.



## 6. Food Preparation

Since all foods are eaten in their raw state by Hygienists, we do not have to worry about cookstoves and the gas or electricity that is unnecessary to operate them. In fact, the Hygienic diet is so easy to prepare, there is practically no preparation at all. All that is required is a quick rinse to wash the dirt off of the fruits and vegetables and that's about all.

Shelling nuts is really more fun than work. Shelling also makes you eat slower and masticate the nuts well. This ensures better digestion and assimilation.

Since little time is spent in food preparation, more time is available for enjoying the other benefits of the Hygienic lifestyle.



## 7. Sunshine, Fresh Air, Exercise

Other aspects of the Hygienic lifestyle consist of sunshine, fresh air, and exercise. These fit easily into a lifestyle of self-sufficiency. While we are gardening and planting our fruits and vegetables, we are receiving the sufficient benefits of all three life essentials. We do not have to think about doing morning calisthenics when we are getting so much natural exercise tending to everyday chores.

Country hying and homesteading bring the benefits of, fresh air that is so scarce in the cities. All of these factors come naturally and easily when a Hygienic lifestyle is followed.



## 8. Rest, Relaxation And Emotional Well-Being

After working in the fresh air of your homestead, rest and relaxation will also come naturally in your tranquil environment. There is nothing like fresh air and exercise to promote sound and restful sleep and you will wake up refreshed and ready to meet all of the challenges of the day.

When you are healthy physically, you will be likewise healthy mentally and emotionally. Nothing is more restful emotionally than tending your flower bed around your house, planting the seedlings and

watching them slowly bloom during the season. It is really a satisfying feeling of accomplishment to know that you had a part in such a beautiful display of nature.



## 9. Our Body Is Self-Sufficient

While striving at self-sufficiency on a homestead, our body is already an "old hand" at such matters. From the moment of birth, the body is self-healing or self-repairing, self-directing and self-regulating on a continual basis. Let's take a lock at how it has been accomplishing this task.

## 9.1 Cells of Repair

Our body has certain cells with very specialized jobs to perform. These cells work for us to maintain health and thwart any outside influence that may interfere with our well being.

## 9.2 Neutrophil

The neutrophil is a white blood cell that is one of the most common and most important of the cells active in the healing and repair process. These cells contain large quantities of a characteristic protein that has a marked ability to dispose of decayed or spent bacteria and other debris.

During the inflammatory reaction, neutrophils migrate into the tissues where they are very active phagocytes. In this situation, neutrophils are mainly responsible for ingesting the unwanted debris that accumulates. During phagocytosis, the granules or lysosomes of the cells are discharged and many of the cells die; the aggregate of dead neutrophils forms the material known as pus. Bacteria then proliferate to feast on this pus, thus making it easier to expell.

## 9.3 Eosinophil

Eosinophils are white blood cells that occur in the bloodstream in much smaller numbers than do neutrophils. They are also somewhat phagocytic and are found in greatly increased numbers in both blood and tissues during inflammatory conditions.

## 9.4 Basophils

Basophils constitute only 0.5 percent of the white cells of the blood. They are said to contain histamine and a heparin-like substance. Histamine dilates capillaries and often permits fluid to move through the capillaries and into the tissues. Heparin is an anticoagulant of the bipod. Apparently tissue basophils become the mast cells of the tissues. The large granules of mast cells are thought to store enzymes.

Mast cells are important in cellular mechanisms needed during injury.

## 9.5 Monocytes

There are comparatively few monocytes in the blood-about 5 percent of the total white cell count. Monocytes are actively motile and phagocytic. It is thought that they function in contributing to the repair and reorganization of tissues.

Monocytes and macrophages are capable of engulfing old, worn out neutrophils, mast cells, and

particles of tissue in the process of cleaning up an area of inflammation after the initial stages have been passed and recovery is in progress.

## 9.6 Fibroblasts

The function of fibroblasts in tissue repair is to lay down dense collagen fibers to form a firm, mechanically-strong replacement for dead tissue. The simplest such situation is after an incised wound has been made in the skin. There the collagen fibers are oriented transversely across the incision, restoring mechanical strength.

## 9.7 Lymphocytes

Lymphocytes are also strongly phagocytic and carry out their duty of healing and repair by assisting the neutrophils during inflammation conditions and injury

## The Organs of Repair

## 9.8 Lymph Nodes

The lymph nodes contain small lymphocytes and large dendritic macrophages. The dendrites of the macrophages carry important impulses or messages to the cell body.

The lymph stream widens very greatly as it passes through the node; therefore the rate of flow is greatly reduced. The lymph filters through a maze of passageways lined with phagocytic cells. Such cells engulf bacteria and other foreign materials from the lymph stream. Thus the body is kept in a healthy and stable condition.

## 9.9 The Spleen

The spleen has four major functions:

1. Blood destruction - Old red blood cells are destroyed in all parts of the reticuloendothelial system, including those of the lymph nodes and spleen. (Reticuloendothelial system applies to those cells scattered throughout the body that have the power to ingest bacteria and solid particles.)
2. Cellular production - The spleen manufactures lymphocytes and monocytes.
3. Blood storage - The spleen serves as a reservoir for blood, or, more specifically, for red blood cells, as most of the plasma is returned to the circulation whereas red blood cells are enmeshed in the splenic pulb. Marked contraction of the spleen occurs during muscular exercise, thereby releasing red blood cells and increasing oxygen capacity. The spleen undergoes rhythmic variations in size in response to physiologic demands, such as exercise and hemorrhage, and thus influences the volume of circulating blood. The volume of stored blood may vary from a liter to as little as 50 ml.
4. Blood filtration - The spleen, serving as a part of the body's reticuloendothelial mechanism, filters spent cells and their debris from the blood.

## 9.10 The Liver

Organisms are filtered from the blood by macrophages in the wall of the sinusoids (minute blood vessels), and various toxic chemicals are removed from the blood by liver cells.

The sinusoids are lined partly by flat nonphagocytic endothelial cells and partly by more rounded and irregular shaped macrophages (or Kupffer cells) that project into the lumen of the sinusoid. These cell?

are similar in structure to macrophages elsewhere and are avidly phagocytic.

The protective function of the liver is associated with its ability to detoxify products of catabolism, that might accumulate in dangerous proportions. These products are changed chemically into substances that can be excreted by the kidneys or through the intestinal tract. Macrophages present in the liver sinusoids aid in filtering foreign matter from the blood.

## 9.11 The Bone Marrow

Bone marrow is highly important as the source of the cells of the blood and other cells in the body's system. Development of blood cells within the bones commences during the fifth month of fetal life.

Blood-forming elements appear initially in the centers of the bone marrow cavities; the blood-forming centers later expand to occupy the entire marrow space. This widely-dispensed blood cell formation continues until puberty, when the marrow in all the ends of the long bones becomes less cellular and more fatty, giving rise to yellow bone marrow, in which most of the hematopoietic tissue has been replaced by fat. In the adult, only the red bone marrow, located principally in the skull, vertebrae, ribs, sternum, and pelvis, retains hematopoietic activity. The total productive bone marrow in the adult is about 1,400 gm.

It is apparent that a most important part of the bodily repair mechanism is the production of cells—polymorphs, lymphocytes, macrophages, and plasma cells. When bodily mechanisms break down, one of the commonest causes of impairment is failure to produce these cells. The failure may be due to drugs or poisons, to gross errors in diet, to destruction of the bone marrow by neoplasm, or to irradiation of the marrow. The way that the mechanism fails depends on what group of cells is most severely affected. If the precursors of neutrophil polymorphs are affected, then there is an acute shortage of cells able to phagocytose dead or decaying bacteria. Alternatively, the megakaryocytes may be damaged. These are the precursors of the blood platelets, the cells that play a vital part in blood clotting. In their absence, the blood will not clot and the individual may bleed to death. Such abnormalities only occur in an enervated and toxic body. When you are living correctly, cells that are active in healing and repair will be present in correct numbers to maintain a state of health.

From the above study of the roles of the cells and organs of repair, you can clearly see that the body is constantly at work to maintain homeostasis or ideal operating conditions. Even under some adverse conditions (when we disobey some physiological law of nature), these forces remain active. It is only after repeated abuse that the healing forces fail because they become overwhelmed and exhausted. It is the duty of the teacher, then, to instruct his client to restore the conditions of health. The body's healing forces will then reachieve normalcy.

# 10. Inflammation

Inflammation is a healing response. Whenever there is tissue damage as a result of injury, the damaged tissue cells produce histamines. These histamines cause changes in tiny blood vessels, which in turn release fluids into the injured area. Local blood flow increases, bringing special blood cells (whose specialty is collecting alien substances for elimination) to the area. Along with these cells comes fibrinogen, which causes clotting. The clotting results in what is called "walling off," that is, nature literally builds a partition between the infected area and the rest of your body. The partition, or wall, stops body fluids from moving outside the infected area, and these fluids build up in the area, causing the characteristic swelling of inflammation.

Before inflammation can arise, there must exist an exciting cause in the form of some obstruction or of some agent inimical to health and life. In this light, we see inflammation as a healing process.

Dr. H. Lindlahr explains that the body does not suppress the growth and multiplication of bacteria until the morbid matter on which they subsist has been decomposed and consumed, and until the

inflammatory processes have run their course through the five stages of inflammation. He says serums and antitoxins given in powerful doses at the different stages of any disease may check and suppress microbial activity and the processes of inflammation before the latter have performed their natural roles and before the morbid matter has been eliminated.

The five stages of inflammation as described by Lindlahr are as follows:

1. Incubation - During this stage, morbid matter, poisons, and other excitants of inflammation collect and concentrate in certain parts and organs of the body. When they have accumulated to such an extent as to interfere with the normal function or to endanger the health and life of the organism, the life forces begin to react as an emergency basis to the obstruction or threatening danger by means of inflammatory processes to accelerate healing.
2. Aggravation - During the period of aggravation, the phagocytes engulf toxins within the body. This is accompanied by a corresponding increase in fever and inflammation, until it reaches its climax, marked by the greatest intensity of feverish symptoms.
3. Destruction - There is disintegration of tissues due to the accumulation of exudates due to pus formation and body development of abscesses, boils, fistulas, open sores, etc., as exits for the toxic suppuration.
4. Abatement - The absorption and elimination of exudates, pus, etc., takes place during the period of abatement. It is accompanied by a gradual lowering of temperature, pulse rate, and the other symptoms of fever and inflammation.
5. Resolution or Reconstruction - When the period of abatement has run its course and the affected areas have been cleared of the morbid accumulations and obstructions, then, during the fifth stage of inflammation, the work of rebuilding the injured parts and organs begins.

It is extremely important not to interfere with any of these stages. The best action to take is to put the body to rest so that all of the energy can be utilized for healing. Lindlahr explains what may happen if healing is suppressed during any of these stages of inflammation.

## 10.1 Suppression During the First Two Stages of Inflammation

Lindlahr says that this practice always involves the danger of causing uneliminated poisons to overwhelm vital parts and organs, thus laying the foundation for chronic destructive disease.

## 10.2 Suppressing During the Third Stage of Inflammation

If suppression takes place during this stage, the affected areas may be left permanently in a condition of destruction and this also leaves the affected organs permanently in an abnormal condition.

## 10.3 Suppression During the Fourth and Fifth Stages of Inflammation

If these processes of elimination and reconstruction are interfered with or interrupted before they are completed, the affected parts and organs will not have a chance to become entirely well or strong. They will remain in an abnormal, crippled condition, and their functional activity will be seriously handicapped. Rebuilding has not been completed. The body will effect a thorough and efficient repair if allowed to do its work unhampered.

Often, people regard inflammation as a "disease" entity to be suppressed, but in reality it is a healing process where nature makes massive attempts to reestablish health.

## 10.4 Healing in the Skin

An excellent example of the healing powers of the body is seen in wound healing. When the skin is broken due to a wound, the tissue is first sealed by plasma that leaks from the severed ends of small

capillary blood vessels. It clots forming a glue-like substance that binds the sides of the wound together. This substance is proteinaceous in nature.

Small buds of cytoplasm from the capillary lining cells move into the clot where they fuse in the middle. The neutrophils and macrophages now move to the site and remove debris by phagocytosis.

Fibroblasts begin to synthesize collagen fibers that are laid down in amounts greater than normally found in the skin. This forms the scar tissue that is normally seen after healing of any cut. The epithelial cells move and divide and eventually restore the skin to normal proportions.

## 10.5 Enkephalins

Another example of the ability of the body's own intrinsic forces to take care of every need is demonstrated in the newly-discovered enkephalins.

It was suspected that the brain and spinal cord contained narcotic receptors. These are sites on cell surfaces where a narcotic would have to bind in order to produce narcosis. It was reasoned that if the body has receptors for narcotics, then it must produce some narcotic-like substances.

On December 19, 1975, Hughes, Kosterlitz, and their coworkers discovered a new material from pig brain and reported its chemical structure. It turned out to be two substances, both peptides that were called enkephalins. It is thought that the enkephalins cause a reaction that inhibits the release of the sensory nerve's neurotransmitter when they bind themselves to the receptors. This partially blocks the impulse to the brain and as more enkaphalins are available on the portion of the end of the sensory nerve, neuro-transmitter production is blocked and still less pain is perceived. If still more enkephalins are produced, pain may be greatly eased or eliminated completely.

It is suspected that enkephalins exist to a certain extent at all times but the levels greatly increase during times of need. A signal of pain would initiate further production of this chemical.

It is theorized that enkephalins may also play a role in mental illness. A normal amount in the amygdala (a mass of gray matter in the anterior portion of the temporal lobe of the brain) may act as the body's own defense against disappointments and losses. A deficiency of enkaphalins in those brain regions that are involved in emotions may result in increased mental pain and depression.

It has been discovered that certain brain receptors still bind morphine more effectively than it binds enkaphalin. Now scientists have discovered small amounts of morphine in both human and cow's milk. Plants in the diet are likely sources for this morphine. Lettuce, for example, has been found to have measureable amounts.



## 11. Freedom From Reliance Upon The Medical Community

Since the body is a self-healing and self-repairing organism, the Hygienist does not rely on physicians, psychiatrists, drug companies, or hospitals. You can be self-sufficient with the knowledge that the body will heal itself when the need arises and the latest "cures" that are offered by physicians need not be considered. Their nostrums interfere with healing.

When you are choosing a site for your homestead, you do not have to consider the availability of drugstores to supply you with any of their poisons. You know that such substances are neither needed nor desirable. Your lifestyle will be so satisfying and fulfilling that emotional well-being is ensured. No

visits to the psychiatrist will ever be required. You will truly feel free and self-sufficient.



## 12. Questions & Answers

**If we choose to purchase our food from the supermarket, is there much of a problem regarding food contamination with pesticides, etc.?**

> The environmental contamination of food is a nationwide problem. In a government survey of the 50 states, 243 food contamination sources were identified. These include only the most poisonous substances that have resulted in immediate sickness or death. The government attempts to regulate the use of these poisonous sprays so their use is not so heavy to occasion immediate death but this does not mean that they are safe in small amounts. Any amount is deadly because it will accumulate in the tissues of the person eating these sprays on their fruits and vegetables. The only way to safeguard yourself against these poisons is to grow your own or purchase organically-grown foods.

**If our supply is limited in organic produce, what can we grow to supplement our needs?**

> Sprouts is probably your best bet for ease of growing in a limited space during the off season for gardening. The sprout is very high in all vitamins and minerals and is most easy to digest. The proteins are split into amino acids, fats into fatty acids, and starch into sugars. They are therefore, an excellent addition to our diet.

**While we are waiting for our nuts and seeds to ripen on our homestead, can our protein needs be met with the fruits and vegetables we grow without the concentrated proteins?**

> Yes, your protein needs can be met most adequately on a diet of fruits and vegetables. Following is a list of the protein content for some fruits and vegetables: (From *Composition and Facts About Foods* by Ford Heritage.)
>
> Grams per 100 grams edible portion
>
> Fresh peas 6.3
> Kale leaves 6.0
> Pawpaw 5.2
> Dried apricot 5.0
> Brussels sprouts 4.9
> Collard leaves 4.8
> Dried fig 4.3
> Broccoli 3.6
> Cauliflower 2.7
> Raisin 2.5
> Savoy cabbage 2.4
> Date 2.2
> Kohlrabi 2.0
> Snapbeans 1.9
> Sapote 1.8
> Celeriac 1.8

Black raspberry 1.5
Banana 1.2
Fresh fig 1.2
Casaba melon 1.2
Red raspberry 1.2
Chinese cabbage 1.2
Eggplant 1.2
Carrot 1.1
Tomato 1.1
Apple 1.0
Apricot, fresh 1.0
Orange 1.0
Soursop 1.0
Celery 0.9
Cucumber 0.9
Honey dew 0.8
Tangerine 0.8
Blueberry 0.7
Sweet red pepper 1.4
Lettuce (Romaine) 1.3
Pear 0.7
Japanese persimmon 0.7
Strawberry 0.7
Grapes 0.6
Guava 0.6
Nectarine 0.6
Papaya 0.6
Mango 0.7
Cantaloupe 0.7
Grapefruit 0.5
Mamey 0.5
Plum 0.5
Pomegranate 0.5
Watermelon 0.5
Pineapple 0.4
Apple 0.2

Our protein needs are not large—certainly much less than the Daily Recommended Allowances. A daily average of 20 to 25 grams of protein is a generous one. There are many people who can get along fine on as little as 16 grams a day. From the above list, it should be obvious that the Hygienic diet generously fulfills this need even without the addition of concentrated proteins in the form of nuts and seeds.

## Article #1: The Natural Food of Man by Emmett Densmore, M.D.

In studying the writings of Trall, Nichols, Shew, and other writers and Hygienic physicians, I became convinced that what is sound reasoning and good practice in the case of the illness of horses and cattle is equally wise and good in the treatment of human beings; and since in the case of the sick horse the chief remedial measure for his recovery is a restriction of his diet, so I became convinced it ought to be in the event of a human being taken ill. Moreover, since, as before remarked, animals in a state of nature are quite generally in vigorous health and strength, just so, I argued, will man become and be if the causes underlying his illness are discovered; and I became convinced that when these causes are discovered they will be seen to relate chiefly to the matter of diet.

In pursuance of this inquiry, and meditating upon the data which this theory furnishes, I noted that animals in their natural state live upon foods which are spontaneously produced by nature, while man not only does not live upon foods so produced, but is almost universally living upon artificial foods artificially produced.

The thought occurred to me that since nature has provided a natural food for all animals below man, it is not unreasonable to suppose that no exception was made in his case, and that nature has provided a food that is as natural to man as grasses to the herbivora, or flesh to the carnivora. If so, what is this natural food of man?

Scientists are in agreement that man made his advent upon the planet in a warm climate; also that primitive man was without tools and without fire. If this position be contested, it is not difficult to substantiate it. If it be allowed without challenge, the inquiry as to what must have been the natural diet of man becomes simple and easily solved. If man first lived in a warm climate, and if, like other animals, he subsisted on foods spontaneously produced by nature, these foods must have been those which grow wild in such a climate, quite probably such foods as are still spontaneously produced in such localities. The woods of the south, as is well-known, abound in sweet fruits and nuts. It is taught by botanists that wheat is an artificial product developed from some grass plant not now known.

Moreover, cereals are the product of the temperate zone, not of those regions where there is no winter; and it was therefore a necessity of man's sustenance when he was without agriculture, without tools, and without fire, and had to depend upon foods spontaneously produced by nature, that he live in a region where these foods were produced at all seasons of the year. This narrows or confines the inquiry to two articles of diet—fruits and nuts.

When this thought was fully borne into my mind, I first asked myself: how adequate is such a diet for man? It is well-known that there are three principal classes of food which are required in every healthy dietary, namely, the carbonaceous, the nitrogeneous, and the phosphatic or mineral. The function of the carbonaceous food is to support the heat of the body and the vital power; the office of the nitrogeneous is to support muscular growth; and that of the phosphatic is more especially to support the brain and nerve tissues. The proportionate amounts of these various foodstuffs daily required are said by physiologists to be about 22 ounces in the dry state, and of these about 20 ounces are needed of the carbonaceous, about one ounce of the nitrogeneous, and less than an ounce of the phosphatic. How, I asked myself, does this natural food—fruit and nuts—answer these requirements? I saw at a glance that, according to eminent chemists and authorities on the constituent elements of these foods, they abound in the requisite elements for the adequate support of the human frame, and, moreover, that they contain these elements in about the right proportion. Furthermore I saw that I had not only hit upon foods spontaneously produced by nature, but also upon foods which need no artificial preparation, no cooking, no sweetening, seasoning, or manipulation of any kind to make them palatable and attractive. If the dishes that are set before a gourmet, those that have been prepared by the most skillful chefs, and that are the product of the most elaborate inventions and preparations, were set beside a portion of the sweet fruits and nuts as produced by nature, without addition or change, every child and most men and women would consider the fruits and nuts quite equal if not superior in gustatory excellence to the most recherche dishes.

Granting all this to be true, it does not follow that the problem has been solved. While fruits and nuts may be the natural food of man, and might have been an adequate diet for primitive tribes who had nothing to do but pluck and eat, and who had none of the severe mental strain inevitable to those in active pursuits in modern civilization, it does not follow that these foods are adequate for civilized man in his vastly changed nature and conditions. A scientist is said to be one who observes facts and classifies them, and science, then, is nothing more nor less than systematically classified facts. I saw that nothing but a scientific test could solve the problem. While it does not follow that sweet fruits and nuts are an adequate diet for man today because they undoubtedly formed the diet of primitive man, still, the fact that they contain every element needed for the support of the human frame, and the fact that these foods were undoubtedly those on which primitive man subsisted, afforded a sufficient basis for justifying an experiment to ascertain what would be the effect of such foods upon modern man. The primal aim underlying this inquiry is the effort to determine what are the causes of modern diseases, and how man may be made as healthy as the animals are in a state of nature.

Instituting a comparison between sweet fruits and nuts on the one hand, and the diet of civilization on the other, I soon detected an essential difference. I saw that while bread, cereals, and vegetables are the basis of the diet of the present day, that starch is the chief element in these foods. Scrutinizing the component parts of sweet fruits and nuts, I saw that these fruits contain very little starch, and hence perceived that I had brought to light a fact that was not unlikely to bear an important part in the solution of the problem before me. What is the effect of starch upon the system? Wherein does a diet that is without starch differ physiologically from one in which starch is the predominant element? In that the two foods involve a very different process of digestion. Sweet fruits are composed largely of glucose, with a fair proportion of nitrogen. As soon as such fruits are eaten the glucose is found ready, prepared by the hand of nature, to be absorbed and assimilated by the system. When first taken into the stomach, the nitrogenous portion of these foods is unassimilable, but when they meet and mix with the gastric juice, they are readily converted into a substance which is at once soluble and assimilable by the system. When the nuts of southern climes—almonds, Brazil nuts, and the like—are ingested, the nitrogenous elements are fixed or free oils are the chief elements of nourishment. The nitrogenous portion, like the same elements in the sweet fruits, is made soluble and assimilable by the gastric juice; the oil is carried to the intestines and meets with the pancreatic juice before it is made into an emulsion which renders it assimilable. There is a small portion of starch in most nuts, and in some fruits. While the ptyaline of the saliva will convert a small fraction of starch foods into glucose, as will hereafter be shown, only a small portion of this transformation is effected in the mouth. As soon as the starch undergoing digestion by its admixture with the saliva reaches the stomach, the acid nature of the gastric juice at once prevents any further change of the starch into glucose, and therefore, although undergoing in the stomach mechanical processes of digestion sufficient to render fruits and nuts soluble and assimilable, the starch is still undigested, and must be passed on to the intestines to undergo a second process of digestion before it is soluble and assimilable.

We are here confronted by a somewhat startling discovery. If it be granted that the sweet fruits and nuts of the south are the natural food of man, it follows that very much the larger proportion of the nourishing elements of man's natural food is digested in the main stomach. True, there is a small percentage of starch in some nuts and in some fruits, and nuts are rich in oil, and this oil and starch must be digested in the second stomach. This relatively small amount of food requiring intestinal digestion is somewhat in proportion to the relative size of the two stomachs, the main stomach in both man and the higher apes being a large organ, and the duodenum or second stomach a small one.

Granting that fruits and nuts and like foods are naturally adapted to man's digestion, this adjustment of the relative sizes of the two stomachs is quite in harmony with the food to be digested. Since man, by artificial contrivance and agriculture, has developed and employed cereals and starchy vegetables as the basis of his diet, he has reversed what appears to be the natural order. He is now living upon a diet the larger proportion of which, although remaining in the first stomach to await the digestion of the nitrogenous portions, still remains mostly undigested, and is passed on to the second stomach before

digestion takes place. That the main stomach is thus called on to perform but a relatively small part of the digestion of his food, and the second stomach, although in point of capacity a relatively insignificant organ, is called upon to perform the digestion of the larger portion of his food.

It has been urged as an objection that since the second stomach is provided with a digestive ferment that is adapted to the digestion of starch foods, this fact is to be taken as a proof that such digestion was designed in the formation of man's body. A satisfactory answer to this objection is found in the fact, as before stated, that man's natural food—granting that southern fruits and nuts constitute that regimen—has a proportion not only of oil but of starch, and hence there is a good reason why man's second stomach was provided with a digestive juice adapted to such digestion. But since in man's natural food the starch and oil constitute but a small fraction of his entire food, it is reasonable to expect that a smaller-sized apparatus would be found adapted to their digestion; and such is the fact as regards the relative capacity of the two stomachs.

It has also been urged by objectors that the thousands of years during which man has made cereals a chief portion of his diet have not unlikely modified his anatomy and physiology by evolutionary charges, and that, whatever might have been his diet and physical conformation originally, these thousands of years have developed him into a natural starch-eating animal. A conclusive refutation of this contention is the fact—more fully amplified in succeeding chapters—that the orangutan and the several species of long-armed apes, which have, apparently since time began, fed upon nuts and fruits, to the exclusion of cereals and starchy vegetables, have today the same digestive apparatus in substantially the same proportion of parts as man, after his thousands of years of cereal eating. This fact is undeniable evidence that man's organs have not undergone essential modification or change by these centuries of unnatural diet.

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